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rather than ashy, feathers of the back having hardly ever any trace of the black central markings often shown by *migratoria*. Remiges dark olive brown, lighter and browner than in *migratoria*. Throat white, streaked with black, the streaks fewer, smaller, and less intensely black than in *migratoria*. Breast, sides, axillars, and most of the under wing-coverts light reddish brown of a slightly deeper shade than 'tawny ochraceous' of Ridgway, whereas in *migratoria* these parts range from Ridgway's 'cinnamon-rufous' nearly to his 'burnt sienna.' Feathers of the belly partly of the color of the breast, partly white. Flanks, legs and under tail-coverts white, mixed with gray.

"The differences between the females of the two forms are so closely parallel to those of the males that a description of them is unnecessary."

The measurements given show the southern form to be considerably smaller than the northern.

Geographical range.—"Probably all the Robins breeding in the Carolinas and Georgia, outside of the mountain region of these States, will prove to belong to the new form, while those that pass the summer among the mountains, and in the low country of the adjacent region to the north may be expected to be variously intermediate between it and true *migratoria*."

NEW SUBSPECIES OF NORTH AMERICAN BIRDS.

BY WILFRED H. OSGOOD.

IN identifying birds collected while working in the interests of the Biological Survey, on the coast of British Columbia and Alaska during the past season, comparisons have been made which have led to the discovery of several well marked undescribed subspecies. Several of these which do not come within the scope of special reports now in preparation are here described. For the freedom of the Biological Survey and the National Museum collections, and for generous criticism, I am indebted to Dr. C. Hart Merriam and Mr. Robert Ridgway. For the loan of specimens I thank Mr. Joseph Grinnell and Mr. F. H. Fowler of Palo Alto, California.

**Lagopus leucurus altipetens,¹ subsp. nov. SOUTHERN
WHITE-TAILED PTARMIGAN.**

Type from Mt. Blaine, Colorado. No. 69774 U. S. National Museum, ♀ ad. Collected Sept. 3, 1874, by C. E. Aiken.

Characters.—Adult in fall plumage similar to *Lagopus leucurus*, but general color of upperparts buff instead of gray; adult in summer plumage indistinguishable in color from *leucurus*; wings and tail decidedly longer than in *leucurus*.

Color.—Adult male in fall plumage: Upper parts pale cinnamon rufous, back, rump and upper tail-coverts finely dotted and vermiculated with brownish black; head and neck all around somewhat lighter with broader vermiculation and spotting; breast, sides and flanks similar to back but darker; occasional feathers of breast with broad bars or median areas of white; middle of abdomen, under tail-coverts, tail and wings pure white.

Measurements.—The southern bird is considerably the larger as will be seen by the following table. Measurements are in millimeters.

		Locality.	Wing.	Tail.	Bill from nostril.	Tarsus.
<i>Lagopus leucurus</i>	♀	Cook Inlet, Alaska .	162	103	10	30
"	♀	Glacier Bay, " .	165	102	9	31
"	♀	White Pass, " .	166	97	9	29
"	♀	Nahanna Mts., N. W. T.	167	104		31
"	♀	² Rocky Mts., lat. 54° N.	172	102		31
<i>Lagopus l. altipetens</i>	♀	Mt. Audubon, Colo. .	184	114	10	31
"	♀	Mt. Blaine, " .	188	119	9.5	29
"	♂	" " .	182	120	9.5	31
"	♂	Bald Mt. " .	189	115	9	30
"	♂	San Juan Mts. " .	180	110	9	33

Remarks.—Until the present year the northern White-tailed Ptarmigan has been represented in the National Museum collection only by specimens in summer plumage or in white winter plumage. During the past season, however, I secured an adult female in fall plumage in the mountains on the south side of Turnagain Arm, Cook Inlet, Alaska. Before skinning this bird, it was evident to me that it was different from any ptarmigan that I had ever seen before. Consequently it was one of the first birds

¹ Altipetens = seeking the heights.

² These are the measurements of Swainson's type expressed in millimeters.

which I sought to identify on my return from the field. On comparing it with fall specimens from the mountains of Colorado it was immediately seen to be a dusky grayish bird tinged with olivaceous and therefore very markedly different from the cinnamon rufous Colorado bird. It is also much smaller than the Colorado bird and agrees in this respect with three other northern specimens from White Pass, and Glacier Bay, Alaska, and Nahanna Mountains, N. W. T., respectively.

The name *leucurus* seems to be applicable to this small northern form. The measurements given by Swainson indicate the smaller bird and one of the specimens which he describes is said to be "in the act of assuming its winter dress" and to have "the base of the whole upper plumage blackish grey" which exactly describes the Cook Inlet bird above referred to and could not possibly apply to any of the Colorado birds. In summer plumage the two forms are distinguishable only by size.

***Anorthura hiemalis helleri*, subsp. nov. KADIAK WINTER
WREN.**

Type from English Bay, near Kadiak, Kadiak Island, Alaska. No. 167276 U. S. Nat. Mus., Biological Survey Collection, ♂ ad. Collected Oct. 3, 1900, by W. H. Osgood and E. Heller. Orig. No. 538.

Characters.—Slightly larger and paler colored than *Anorthura hiemalis pacifica*; otherwise similar.

Distribution.—At present known only from the type locality.

Color.—Adult male in fall plumage: Upperparts paler than in *A. h. pacifica*, general effect cinnamon brown, lightest on head, neck and interscapulars, deepening somewhat on back and rump; upper tail-coverts and rump faintly barred with dusky; scapulars spotted indistinctly with whitish and faintly barred with dusky; outer web of secondaries and inner primaries brighter than back, distinctly barred with black, outer webs of outer primaries isabella color broadly barred with black; median and greater wing-coverts with pale subterminal spots. Underparts between cinnamon and isabella color, palest on middle of breast and abdomen; flanks, abdomen and crissum barred with brownish black and dull white; tail like edge of secondaries.

Measurements.—Type of *A. h. pacifica*: Wing, 45; tail, 29; exposed culmen, 11.5; tarsus, 16. Average of 4 adults from Seattle, Wash.: Wing, 46; tail, 33; exposed culmen, 11.5; tarsus, 17. Average of 3 adults of *A. h. helleri* from Kadiak: Wing, 48.5; tail, 36; culmen, 12; tarsus, 17.5.

Remarks.—The Kadiak Winter Wren is merely another illustration of the tendency of west coast birds which range as far north as Kadiak to become pale in their northern habitat. The present form tends in slight degree toward *Anorthura alascensis*, but not sufficiently to affect its specific rank. Specimens from the Alaska Peninsula would be of great interest but the gap between *helleri* and *alascensis* is too great to make the existence of intergradation probable. The type of *pacifica* from Simiahmoo, Washington, is in winter plumage and thus quite comparable with fall birds from Kadiak. Its upper parts are almost clear burnt umber, very different from the Kadiak birds which are cinnamon brown with a pale filmy wash over it producing an effect somewhat between the cinnamon and broccoli brown of Ridgway. Five specimens of *helleri* have been examined, three taken in August and two in October. An immature bird from Kadiak is indistinguishable from the same plumage of *pacifica*.

The Kadiak wren is named in honor of Mr. Edmund Heller, my field assistant, to whom much of the success of the past season's work is due.

***Certhia familiaris zelotes*,¹ subsp. nov. SIERRA CREEPER.**

Type from Battle Creek, Tehama Co., California. No. 170708 U. S. Nat. Museum, ♀ ad. Collected Oct. 23, 1898, by R. C. McGregor.

Distribution.—Southern Cascade Mountains of Oregon and Sierra Nevada of California.

Characters.—Similar to *Certhia f. occidentalis* but colors more dusky and less rufescent; rump decidedly contrasted with rest of upper parts; similar to *Certhia f. montana* but much darker; light centers of feathers on head and back much reduced.

Color.—Top of head and back clove brown or between clove brown and sepia, streaked with creamy white; rump and upper tail-coverts between chestnut and hazel of Ridgway (in *montana* the color is cinnamon rufous); wings more nearly black than in any other form, spotted with creamy white; throat nearly pure white; breast slightly creamy; sides, flanks, and crissum lightly washed with fulvous.

Measurements.—A series of measurements of all the specimens available indicates that of the three western forms *occidentalis* is slightly the largest with no appreciable difference between *montana* and *zelotes*.

¹Zelotes = an imitator.

Remarks.— This subspecies has generally been included under the name *occidentalis* but it seems to be more similar to *montana* and its characters might be considered intermediate between those of these two. They are perfectly constant throughout its range, however, so that the form is easily recognizable. The three western forms may be diagnosed as follows:

C. f. montana.— General colors grayish, light centers of feathers of back and top of head broad and conspicuous; rump in contrast with back. *Distribution.* Rocky Mountains from New Mexico north to Alaska.

C. f. zelotes.— General colors dusky; light centers of feathers of back and top of head much reduced; rump in contrast with back. *Distribution.* Cascade Mts. of Oregon and Sierra Nevada of California.

C. f. occidentalis.— General colors rufescent; rump blending with back. *Distribution.* Pacific Coast from Sitka, Alaska, to Marin County, California.

***Hylocichla aonalaschkæ verecunda*,¹ subsp. nov. COAST
HERMIT THRUSH.**

Type from Cumsheewa Inlet, Moresby Island, Queen Charlotte Islands, British Columbia. No. 166901, U. S. National Museum, Biological Survey Collection. ♀ ad. Collected June 22, 1900, by W. H. Osgood and E. Heller. Orig. No. 429.

Distribution.— Islands and coast of British Columbia and southeastern Alaska; south in winter to California.

Characters.— Similar to *Hylocichla aonalaschkæ* but darker and richer colored; essentially a brownish bird rather than a grayish olivaceous one.

Color.— Type in breeding plumage: Nape and back brownish olivaceous somewhat between the raw umber and broccoli brown of Ridgway; forehead, top of head and rump slightly browner than back; upper tail-coverts and tail Mars brown to burnt umber; throat and breast spotted and streaked as in *H. aonalaschkæ*, but with ground color very much more buffy; sides and flanks grayish olivaceous.

Measurements.— Average of 4 adult females from Queen Charlotte Islands, B. C., and Sitka, Alaska: Wing, 82; tail, 70; culmen, 13; tarsus, 28. Average of 4 adult females of *H. aonalaschkæ* from Kadiak, Alaska: Wing, 84; tail, 72; culmen, 13; tarsus, 28.

Remarks.— Although the Hermit Thrush has not been found by recent collectors on the island of Unalaska and although

¹ Verecunda = shy, modest, retiring.

the absence of the alder brush¹ makes it improbable that it ever has been or ever will be found there, it seems necessary to use the name *aonalaschkæ* for the Hermit Thrush which breeds nearest to Unalaska. An exactly parallel case is found in *Passerella iliaca unalaschensis* which has been restricted in the same manner.² Birds from Nushagak and Kukak Bay on the Alaska Peninsula may therefore be taken as typical examples of *H. aonalaschkæ*. These do not seem to differ from numerous specimens from Kadiak but they are decidedly paler and grayer than those from Sitka and the Queen Charlotte Islands. It is therefore necessary to name the southern form, which corresponds in character and in geographic distribution to such subspecies as *Passerella iliaca townsendi*, and *Junco hyemalis oregonus*. Specimens from the vicinity of Lynn Canal and Yakutat are somewhat intermediate though nearer to *aonalaschkæ*. Both *aonalaschkæ* and *verecunda* are found in California in winter and they differ at this season in practically the same way and to the same degree that they do in summer. Winter specimens of both forms from the same locality (Fort Klamath, Oregon) are in the National Museum collection and both are represented at least as far south as San Bernardino, California.

The name *Turdus nanus* which was proposed by Audubon in 1839 has been applied to the western Hermit Thrushes, but a careful examination of the facts connected with this name seems to prove that it should be used for the eastern bird. The most conclusive proof is the original plate (No. 419, fig. 1) which though imprinted *Turdus minor* is cited under *Turdus nanus*. It shows a bird with brown sides which is absolutely diagnostic of the eastern bird. The text also indicates that the original material was practically all eastern. In order to understand the case thoroughly it may be best to quote from Audubon. Prefacing the proposal of the name *nanus* he says:³ "It is ex-

¹ It is possible that alders may be found on some remote parts of the island, in which case the occurrence of both *Hylocichla* and *Passerella* would be probable.

² Cf. Ridgway, Auk, XVII, 30, Jan., 1900.

³ Orn. Biog., V, 204, 1839.

tremely rare in our Atlantic districts, where, however, I have procured a few individuals. Indeed, the first intimation which I received respecting it was from my friend Dr. Charles Pickering of Philadelphia, who, having procured one had kept its wings and head, the smallness of which, struck me at once. I was then far from imagining that its native haunts were the valleys of the Columbia River, from which, however, I have since received it through the kindness of my friend Dr. Townsend, who has also sent me its measurements, 'length 6 inches, alar extent 9.' "

From this it seems that Audubon's material consisted of several eastern specimens procured by himself, one eastern specimen from Dr. Pickering of Philadelphia and one western specimen from Dr. Townsend, the eastern material thus being in excess of the western. The description of *nanus* except the measurements, is almost a verbatim reprint of that given under *Turdus minor*¹ no difference of color whatever being claimed. In the measurements given under *nanus* the extent of the wings is stated to be $9\frac{1}{2}$ inches, so the specimen measured in this connection could not have been the Columbia River specimen which was alluded to previously as measuring but 9 inches in 'alar extent.' If we then eliminate the Columbia River specimen there remain only the eastern ones for the basis of the name.

Therefore it seems that Audubon's description of *T. nanus* was entirely based on exceptionally small specimens of the eastern Hermit Thrush and since this name antedates *Turdus pallasii* Cabanis,² the proper name for the eastern Hermit Thrush is *Hylocichla aonalaschkæ nanus* (Aud.).³ If additional evidence should show the name *nanus* applicable to the western form, which seems improbable, then it would stand for the bird here described as *verecunda*.

¹ Orn. Biog., Vol. I, 304-305, 1831.

² Wieg. Archiv., 1847, I, 205, 1847.

³ The combination *Turdus unalascae nanus* was used by Coues in 1883, *Avifauna Columbiana*, p. 34.